DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below at 201 et seq. underneath my name.

I believe I am the original, first and sole inventor if only one name is listed at 201 below, or an original, first and joint inventor if plural names are listed at 201 et seq. below, of the subject matter which is claimed and for which a patent is sought on the invention entitled

TISSUE-SPECIFIC AND TARGET RNA-SPECIFIC RIBOZYMES

and for which a patent application:

is attached hereto and includes amendment(s) filed on (if applicable)

was filed in the United States on June 24, 1999 as Application No. 09/338,942

with amendment(s) filed on (if applicable)

. was filed as PCT international Application No. on and was amended under PCT Article 19 on (if applicable)

I hereby state that I have reviewed and understand the contents of the above identified application, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, §1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, §119(a)-(d) of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

EARLIEST FOREIGN APPLICA	TION(S), IF ANY, FILED PR	OR TO THE FILING DATE OF	THE APPLICATION
APPLICATION NUMBER	COUNTRY	DATE OF FILING (day, month, year)	PRIORITY CLAIMED
			YES D NO D
			YES D NO D

Intereby claim the benefit under Title 35, United States Code, §119(e) of any United States provisional application(s) listed below.

APPLICATION NUMBER	FILING DATE

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code § 112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, §1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this

-PP				
		STATUS		
APPLICATION SERIAL NO.	FILING DATE	PATENTED	PENDING	ABANDONED

POWER OF ATTORNEY: As a named inventor, I hereby appoint S. Leslie Misrock (Reg. No. 18872), Harry C. Jones, III (Reg. No. 20280), Berj A. Terzian (Reg. No. 20060), Gerald J. Flintoft (Reg. No. 20823), David Weild, III (Reg. No. 21094), Jonathan A. Marshall (Reg. No. 24614), Barry D. Rein (Reg. No. 22411), Stanton T. Lawrence, III (Reg. No. 25736), Charles E. McKenney (Reg. No. 22795), Philip T. Shannon (Reg. No. 24278), Francis E. Morris (Reg. No. 24615), Charles E. Miller (Reg. No. 24576), Gidon D. Stern (Reg. No. 27469), John J. Lauter, Jr. (Reg. No. 27814), Brian M. Poissant (Reg. No. 28462), Brian D. Coggio (Reg. No. 27624), Rory J. Radding (Reg. No. 28749), Stephen J. Harbulak (Reg. No. 29166), Donald J. Goodell (Reg. No. 19766), James N. Palik (Reg. No. 25510), Thomas E. Friebel (Reg. No. 29258), Laura A. Coruzzi (Reg. No. 30742), Jennifer Gordon (Reg. No. 30753), Jon R. Stark (Reg. No. 30111), Allan A. Fanucci (Reg. No. 30256), Geraldine F. Baldwin (Reg. No. 31232), Victor N. Balancia (Reg. No. 31231), Samuel B. Abrams (Reg. No. 30605), Steven I. Wallach (Reg. No. 35402), Marcia H. Sundeen (Reg. No. 30893), Paul J. Zegger (Reg. No. 33821), Edmond R. Bannon (Reg. No. 32110), Bruce J. Barker (Reg. No. 33291), Adriane M. Antler (Reg. No. 32605), Thomas G. Rowan (Reg. No. 34419), James G. Markey (Reg. No. 31636), Thomas D. Kohler (Reg. No. 32797), Scott D. Stimpson (Reg. No. 33607), William S. Galliani (Reg. No. 33885), Gary S. Williams (Reg. No. 31066), Mark A. Farley (Reg. No. 33170) and Ann L. Gisolfi (Reg. No. 31956), all of Pennie & Edmonds LLP, whose addresses are 1155 Avenue of the Americas, New York, New York 10036, 1667 K Street N.W., Washington, DC 20006 and 3300 Hillview Avenue, Palo Alto, CA 94304, and each of them, my attorneys, to prosecute this application, and to transact all business in the Patent and Trademark Office connected therewith.

SENI	D CORRESPONDENC	PENNIE & EDMOND 1155 Avenue of the Avenue of the Avenue York, N.Y. 1003	mericas P	DIRECT TELEPHONE CALLS ENNIE & EDMONDS _{LLP} DOC 212) 790-9090	
	FULL NAME OF INVENTOR	LAST NAME Nottis	FIRST NAME James	MIDDLE NAME S.	
2 0 1	RESIDENCE & CITIZENSHIP	CITY Mt. Pleasant	STATE OR FOREIGN COUNTRY South Carolina	COUNTRY OF CITIZENSHIP USA	
	POST OFFICE ADDRESS	STREET 1010 Casseque Province	Mt. Pleasant	STATE OR COUNTRY South Carolina	ZIP CODE 29464
	FULL NAME OF INVENTOR	LAST NAME Clawson	FIRST NAME Gary	MIDDLE NAME A.	
* 2 0 2	RESIDENCE & CITIZENSHIP	CITY Bethesda	STATE OR FOREIGN COUNTRY Maryland	COUNTRY OF CITIZENSHIP USA	
	POST OFFICE ADDRESS	STREET 5709 Rockmere Drive	CITY Bethesda	STATE OR COUNTRY Maryland	21P CODE 20816
property and a second	FULL NAME OF INVENTOR	LAST NAME Schmidt	FIRST NAME Michael	MIDDLE NAME G.	
2 10 13	RESIDENCE & CITIZENSHIP	Mt. Pleasant	STATE OR FOREIGN COUNTRY South Carolina	COUNTRY OF CITIZENSHIP USA	
77 7 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	POST OFFICE ADDRESS	STREET 1257 Wynnwood Court	спу Mt. Pleasant	STATE OR COUNTRY South Carolina	ZIP CODE 29464
A STATE OF THE STA	FULL NAME OF INVENTOR	LAST NAME Hoel	FIRST NAME Brian	MIDDLE NAME	
2 1 0 1 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	RESIDENCE & CITIZENSHIP	Crry Charleston	STATE OR FOREIGN COUNTRY South Carolina	COUNTRY OF CITIZENSHIP USA	
	POST OFFICE ADDRESS	STREET 36 S. Battery	City Charleston	STATE OR COUNTRY South Carolina	21P CODE 29401
1	FULL NAME OF INVENTOR	LAST NAME Pan	first name Wei-Hua	MIDDLE NAME	
2 0 5	RESIDENCE & CITIZENSHIP	CITY Hummelstown	state or foreign country Pennsylvania	COUNTRY OF CITIZENSHIP China	
	POST OFFICE ADDRESS	STREET 907 Butler Court	спу Hummelstown	STATE OR COUNTRY Pennsylvania	ZIP CODŁ 17036
	FULL NAME OF INVENTOR	LAST NAME Dolan	FIRST NAME Joseph	MIDDLE NAME W.	
2 0 6	RESIDENCE & CITIZENSHIP	Mt. Pleasant	STATE OR FOREIGN COUNTRY South Carolina	COUNTRY OF CITIZENSHIP USA	
	POST OFFICE ADDRESS	STREET 1821 Falling Circle	Mt. Pleasant	STATE OR COUNTRY South Carolina	ZIP CODE 29464
	FULL NAME OF INVENTOR	LAST NAME Schofield	FIRST NAME David	MIDDLE NAME	
2 0 7	RESIDENCE & CITIZENSHIP	CITY Mt. Pleasant	STATE OR FOREIGN COUNTRY South Carolina	COUNTRY OF CITIZENSHIP United Kingdom	
	POST OFFICE ADDRESS	STREET 803K Runaway Bay Drive	Mt. Pleasant	STATE OR COUNTRY South Carolina	ZIP CODE 29464
	FULL NAME OF INVENTOR	LAST NAME Westwater	FIRST NAME Caroline	MIDDLE NAME	
2 0 8	RESIDENCE & CITIZENSHIP	Crry Charleston	STATE OR FOREIGN COUNTRY South Carolina	COUNTRY OF CITIZENSHIP USA	
	POST OFFICE ADDRESS	STREET 803K Runaway Bay Drive	спу Mt. Pleasant	STATE OR COUNTRY South Carolina	ZIP CODE 29464

<u>.</u>

(2) NY2 - 972888.1

PENNIE & EDMONDS LLP DOCKET NO. 9175-010

	FULL NAME OF INVENTOR	LAST NAME Huang	FIRST NAME Cancan	MIDDLE NAME	
2 0 9	RESIDENCE & CITIZENSHIP	спу Charleston	STATE OR FOREIGN COUNTRY South Carolina	COUNTRY OF CITIZENSHIP China	
	POST OFFICE ADDRESS	STREET 1515 Ashley River Road, F49	спу Charleston	STATE OR COUNTRY South Carolina	ZIP CODE 29407

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

	SIGNATURE OF INVENTOR 202	SIGNATURE OF INVENTOR 203
SIGNATURE OF INVENTOR 201	Signification in the significant	
mour		Carolina Westwater
	a	Caroline Westwater
James S. Norris	Gary A. Clawson	
DATE	DATE	DATE
		1/14/2000
1/14/2000		
SIGN ATTIME OF INVENTOR 204	SIGNATURE OF INVENTOR 205	SIGNATURE OF INVENTOR 206
SIGNATURE OF INVENTOR 204	1 ~ .1 ~	
	1 1/21 1/1 \	
Much Litable		
Much La Schridt Michael G. Schmidt	Brian Hoel	Wei-Hua Pan
	DATE	DATE
DATE		
1/14/2000	1/14/00	
1/14/2000	1,1,1,00	
SIGNATURE OF INVENTOR 207	SIGNATURE OF INVENTOR 208	SIGNATURE OF INVENTOR 209
	D.A. Scrofuld	
I best h with	J.A. Suddywer	ano
The state of the s	David Schofield	Cancan Huang
Joseph W. Dolan		DATE
POATE	DATE	
	11.4/2000	1/14/2000
1/14/2000	(, , , = = = = = = = = = = = = = = = =	

NY2 - 972888.1

DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below at 201 et seq. underneath my name.

I believe I am the original, first and sole inventor if only one name is listed at 201 below, or an original, first and joint inventor if plural names are listed at 201 et seq. below, of the subject matter which is claimed and for which a patent is sought on the invention entitled

TISSUE-SPECIFIC AND TARGET RNA-SPECIFIC RIBOZYMES

and for which a patent application:

is attached hereto and includes amendment(s) filed on (if applicable)

■ was filed in the United States on June 24, 1999 as Application No. 09/338,942

with amendment(s) filed on (if applicable)

was filed as PCT international Application No. on and was amended under PCT Article 19 on (if applicable)

I hereby state that I have reviewed and understand the contents of the above identified application, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, §1.56.

hereby claim foreign priority benefits under Title 35, United States Code, §119(a)-(d) of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

EARLIEST FOREIGN APPLICA	TION(S), IF ANY, FILED PR	OR TO THE FILING DATE OF	THE APPLICATION
APPLICATION NUMBER	COUNTRY	DATE OF FILING (day, month, year)	PRIORITY CLAIMED
			YES D NO D
			YES O NO O

Thereby claim the benefit under Title 35, United States Code, §119(e) of any United States provisional application(s) listed below.

in a st			
	APPLICATION NUMBER	FILING DATE	

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code §112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, §1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application:

		STATUS		
APPLICATION SERIAL NO.	FILING DATE	PATENTED	PENDING	ABANDONED

POWER OF ATTORNEY: As a named inventor, I hereby appoint S. Leslie Misrock (Reg. No. 18872), Harry C. Jones, III (Reg. No. 20280), Berj A. Terzian (Reg. No. 20060), Gerald J. Flintoft (Reg. No. 20823), David Weild, III (Reg. No. 21094), Jonathan A. Marshall (Reg. No. 24614), Barry D. Rein (Reg. No. 22411), Stanton T. Lawrence, III (Reg. No. 25736), Charles E. McKenney (Reg. No. 22795), Philip T. Shannon (Reg. No. 24278), Francis E. Morris (Reg. No. 24615), Charles E. Miller (Reg. No. 24576), Gidon D. Stern (Reg. No. 27469), John J. Lauter, Jr. (Reg. No. 27814), Brian M. Poissant (Reg. No. 28462), Brian D. Coggio (Reg. No. 27624), Rory J. Radding (Reg. No. 28749), Stephen J. Harbulak (Reg. No. 29166), Donald J. Goodell (Reg. No. 19766), James N. Palik (Reg. No. 25510), Thomas E. Friebel (Reg. No. 29258), Laura A. Coruzzi (Reg. No. 30742), Jennifer Gordon (Reg. No. 30753), Jon R. Stark (Reg. No. 30111), Allan A. Fanucci (Reg. No. 30256), Geraldine F. Baldwin (Reg. No. 31232), Victor N. Balancia (Reg. No. 31231), Samuel B. Abrams (Reg. No. 30605), Steven I. Wallach (Reg. No. 35402), Marcia H. Sundeen (Reg. No. 30893), Paul J. Zegger (Reg. No. 33821), Edmond R. Bannon (Reg. No. 32110), Bruce J. Barker (Reg. No. 33291), Adriane M. Antler (Reg. No. 32605), Thomas G. Rowan (Reg. No. 34419), James G. Markey (Reg. No. 31636), Thomas D. Kohler (Reg. No. 32797), Scott D. Stimpson (Reg. No. 33607), William S. Galliani (Reg. No. 33885), Gary S. Williams (Reg. No. 31066), Mark A. Farley (Reg. No. 33170) and Ann L. Gisolfi (Reg. No. 31956), all of Pennie & Edmonds LLP, whose addresses are 1155 Avenue of the Americas, New York, New York 10036, 1667 K. Street N.W., Washington, DC 20006 and 3300 Hillview Avenue, Palo Alto, CA 94304, and each of them, my attorneys, to prosecute this application, and to transact all business in the Patent and Trademark Office connected therewith.

(1) NY2 - 972888.1

<u>.</u>

SENI) CORRESPONDENC	PENNIE & EDMOND 1155 Avenue of the Ar New York, N.Y. 10036	mericas PEN	ECT TELEPHONE CALLS NIE & EDMONDS _{LLP} DOC 2) 790-9090	
	FULL NAME OF INVENTOR	LAST NAME Norris	FIRST NAME James	MIDDLE NAME S.	
2 0 1	RESIDENCE & CITIZENSHIP	спу Mt. Pleasant	STATE OR FOREIGN COUNTRY South Carolina	COUNTRY OF CITIZENSHIP USA	
	POST OFFICE ADDRESS	STREET 1010 Casseque Province	спу Mt. Pleasant	STATE OR COUNTRY South Carolina	ZIP CODE 29464
	FULL NAME OF INVENTOR	LAST NAME Clawson	FIRST NAME Gary	MIDDLE NAME A.	
2 0 2	RESIDENCE & CITIZENSHIP	Bethesda	STATE OR FOREIGN COUNTRY Maryland	COUNTRY OF CITIZENSHIP USA	
II	POST OFFICE ADDRESS	5709 Rockmere Drive	επγ Bethesda	STATE OR COUNTRY Maryland	ZIP CODE 20816
<u> </u>	FULL NAME OF INVENTOR	Schmidt Schmidt	FIRST NAME Michael	G.	
3	RESIDENCE & CITIZENSHIP	Mt. Pleasant	South Carolina	COUNTRY OF CITIZENSHIP USA	
7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7	POST OFFICE ADDRESS	STREET 1257 Wynnwood Court	Mt. Pleasant	South Carolina	ZIP CODE 29464
· 2	FULL NAME OF INVENTOR	Hoel Hoel	Brian	MIDDLE NAME	
2 0 4 4	RESIDENCE & CITIZENSHIP	Charleston	South Carolina	COUNTRY OF CITIZENSHIP USA	
1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	POST OFFICE ADDRESS	36 S. Battery	Charleston	South Carolina	29401
	FULL NAME OF INVENTOR	Pan	FIRST NAME Wei-Hua	MIDDLE NAME	
2 0 5	RESIDENCE & CITIZENSHIP	спу Hummelstown	STATE OR FOREIGN COUNTRY Pennsylvania	COUNTRY OF CITIZENSHIP China	
	POST OFFICE ADDRESS	STREET 907 Butler Court	спу Hummelstown	state or country Pennsylvania	ZIP CODE 17036
	FULL NAME OF INVENTOR	LAST NAME Dolan	FIRST NAME Joseph	MIDDLE NAME W.	
2 0 6	RESIDENCE & CITIZENSHIP	Mt. Pleasant	State or foreign country South Carolina	COUNTRY OF CITIZENSHIP USA	
	POST OFFICE ADDRESS	STREET 1821 Falling Circle	Mt. Pleasant	South Carolina	ZIP CODE 29464
	FULL NAME OF INVENTOR	LAST NAME Schofield	FIRST NAME David	MIDDLE NAME	
2 0 7	RESIDENCE & CITIZENSHIP	Mt. Pleasant	STATE OR FOREIGN COUNTRY South Carolina	COUNTRY OF CITIZENSHIP United Kingdom	
	POST OFFICE ADDRESS	STREET 803K Runaway Bay Drive	Mt. Pleasant	STATE OR COUNTRY South Carolina	ZIP CODE 29464
	FULL NAME OF INVENTOR	LAST NAME Westwater	FIRST NAME Caroline	MIDDLE NAME	
2 0 8	RESIDENCE & CITIZENSHIP	Charleston	STATE OR FOREIGN COUNTRY South Carolina	COUNTRY OF CITIZENSHIP USA	
	POST OFFICE ADDRESS	STREET 803K Runaway Bay Drive	спу Mt. Pleasant	STATE OR COUNTRY South Carolina	29464

(2)

PENNIE & EDMONDS LLP DOCKET NO. 9175-010

	FULL NAME OF INVENTOR	LAST NAME Huang	FIRST NAME Cancan	MIDDLE NAME	
2 0 9	RESIDENCE & CITIZENSHIP	Crry Charleston	State or foreign country South Carolina	COUNTRY OF CITIZENSHIP China	
	POST OFFICE ADDRESS	STREET 1515 Ashley River Road, F49	спу Charleston	STATE OR COUNTRY ZIP CODE South Carolina 29407	

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

James S. Norris Gary A. Clawson Caroline Westwater DATE DATE January 3, 2000 SIGNATURE OF INVENTOR 204 SIGNATURE OF INVENTOR 205 SIGNATURE OF INVENTOR 206 WHITE A CLawson Caroline Westwater DATE JANUARY 3, 2000 SIGNATURE OF INVENTOR 206 WHITE A CLawson Caroline Westwater DATE JANUARY 3, 2000	
DATE January 3, 2000 SIGNATURE OF INVENTOR 204 SIGNATURE OF INVENTOR 205 DATE January 3, 2000 SIGNATURE OF INVENTOR 206	
January 3, 2000 SIGNATURE OF INVENTOR 204 SIGNATURE OF INVENTOR 205 SIGNATURE OF INVENTOR 206	
SIGNATURE OF INVENTOR 204 SIGNATURE OF INVENTOR 205 SIGNATURE OF INVENTOR 206	
inh	
with.	
Michael G. Schmidt Brian Hoel Wei-Hua Pan	
DATE DATE	į
January 3, 2000	
SEGNATURE OF INVENTOR 207 SIGNATURE OF INVENTOR 208 SIGNATURE OF INVENTOR 209	
Joseph W. Dolan David Schofield Cancan Huang	
	ļ
Joseph W. Dolan David Schofield Cancan Huang	
DATE DATE	
UB D - 1-1-11 SEPTIME TO THE TOTAL THE TOTAL TO THE TOTA	

(3)

ASSIGNMENT

WHEREAS, WE, GARY A. CLAWSON and WEI-HUA PAN, ASSIGNORS, citizens of the United States and China, respectively, residing at 5709 Rockmere Drive, Bethesda, Maryland 20816; and 907 Butler Court, Hummelstown, Pennsylvania 17036, respectively, are co-inventors with, JAMES S. NORRIS, MICHAEL G. SCHMIDT, BRIAN HOEL, JOSEPH W. DOLAN, DAVID SCHOFIELD, CAROLINE WESTWATER, and CANCAN HUANG, citizens of the United States, the United States, the United States, the United Kingdom, the United Kingdom, and China, respectively, residing at 1010 Casseque Province, Mt. Pleasant, South Carolina 29464; 1257 Wynnwood Court, Mt. Pleasant, South Carolina 29464; 36 S. Battery, Charleston, South Carolina 29401; 1821 Falling Circle, Mt. Pleasant, South Carolina 29464; 803K Runaway Bay Drive, Mt. Pleasant, South Carolina 29464; and 1515 Ashley River Road, F49, Charleston, South Carolina 29407, respectively, of the invention in TISSUE-SPECIFIC AND TARGET RNA-SPECIFIC RIBOZYMES for which we have executed an application for a Patent of the United States

- which is identified by Pennie & Edmonds LLP docket no. 9175-010

County of Dauphin

and WHEREAS, The Penn State Research Foundation, a corporation existing under the laws of Pennsylvania, having a business address at 304 Old Main Street, University Park, Pennsylvania 16802, ASSIGNEE is desirous of obtaining our entire right, title and interest in, to and under the said invention and the said application:

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) to me in hand paid, and other good and valuable consideration, the receipt of which is hereby acknowledged, I, the said ASSIGNOR, have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, unto the said ASSIGNEE, its successors, legal representatives and assigns, our entire right, title and interest in, to and under the said invention, and the said United States application and all divisions, renewals and continuations thereof, and all Patents of the United States which may be granted thereon and all reissues and extensions thereof; and all applications for industrial property protection, including, without imitation, all applications for patents, utility models, and designs which may hereafter be filed for said invention in any country or countries foreign to the United States, together with the right to file such applications and the right to claim for the same Convention for the Protection of Industrial Property, or any other international agreement or the domestic laws of the country in which any such application is filed, as may be applicable; and all forms of industrial property protection, including, without in which any such application is filed, as may be applicable; and all forms of industrial property protection, including, without in which any such application is filed, as may be applicable; and all forms of industrial property protection, including, without in which any such application is filed, as may be applicable; and all forms of industrial property protection, including, without in which any such application is filed, as may be applicable; and all forms of industrial property protection in any country or countries foreign to the United States and all extensions, renewals and reissues thereof;

AND WE HEREBY authorize and request the Commissioner of Patents and Trademarks of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents or other evidence or forms of industrial property protection on applications as aforesaid, to issue the same to the said ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND WE HEREBY covenant and agree that I have full right to convey our entire interest herein assigned, and that I have not executed, and will not execute, any agreement in conflict herewith.

AND WE HEREBY further covenant and agree that I will communicate to the said ASSIGNEE, its successors, legal representatives and assigns, any facts known to me respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, reissue and foreign applications, make all rightful oaths, and generally do everything possible to aid the said ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper protection for said invention in all countries.

IN TESTIMONY WHI	FREOF, We hercunt	o set our hands and seals this	3rd day of January	
		Hay A GARY A	CLAWSON	L.S
State of Pennsylvania)) SS.:			

On this 3 rdday of January, 1888 before me, a Notary Public in and for the State and County aforesaid, personally appeared GARY A. CLAWSON, personally known to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

Notary Public

NOTARIAL SEAL SUSIE M. GIFFORD, Notary Public Hershey, Dauphin County My Commission Expires May 12, 2003

with	7	L.	S.
W	EI-HUA PAN		

State of Pennsylvania

)) SS.:

County of Dauphin

On this 3.7d day of January , 1989 before me, a Notary Public in and for the State and County aforesaid, personally appeared WEI-HUA PAN, personally known to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

Notary Public.

NOTARIAL SEAL SUSIE M. GIFFORD, Notary Public Hershey, Dauphin County My Commission Expires May 12, 2003

ASSIGNMENT

WHEREAS, WE, JAMES S. NORRIS,, MICHAEL G. SCHMIDT, BRIAN HOEL, JOSEPH W. DOLAN, DAVID SCHOFIELD, CAROLINE WESTWATER, and CANCAN HUANG, ASSIGNORS, citizens of the United States, the United States, the United Kingdom, the United Kingdom, and China, respectively, residing at 1010 Casseque Province, Mt. Pleasant, South Carolina 29464; 1257 Wynnwood Court, Mt. Pleasant, South Carolina 29464; 36 S. Battery, Charleston, South Carolina 29401; 1821 Falling Circle, Mt. Pleasant, South Carolina 29464;803K Runaway Bay Drive, Mt. Pleasant, South Carolina 29464; 803K Runaway Bay Drive, Mt. Pleasant, South Carolina 29464; and 1515 Ashley River Road, F49, Charleston, South Carolina 29407, respectively, are co-inventors with GARY A. CLAWSON and WEI-HUA PAN, citizens of the United States and China, respectively, residing at 5709 Rockmere Drive, Bethesda, Maryland 20816; and 907 Butler Court, Hummelstown, Pennsylvania 17036, respectively, of the invention in TISSUE-SPECIFIC AND TARGET RNA-SPECIFIC RIBOZYMES for which we have executed an application for a Patent of the United States

- which is identified by Pennie & Edmonds LLP docket no. 9175-010
- which was filed on June 24, 1999, as Application No. 09/338,942

and WHEREAS, Medical University of South Carolina, an agency of the State of South Carolina, having a business address at 171 Ashley Avenue, Charleston, South Carolina 29425, ASSIGNEE is desirous of obtaining our entire right, title and interest in, to and under the said invention and the said application:

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) to us in hand paid, and other good and valuable consideration, the receipt of which is hereby acknowledged, we, the said ASSIGNORS, have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, unto the said ASSIGNEE, its successors, legal representatives and assigns, our entire right, title and interest in, to and under the said invention, and the said United States application and all divisions, renewals and continuations thereof, and all Patents of the United States which may be granted thereon and all reissues and extensions thereof; and all applications for industrial property protection, including, without limitation, all applications for patents, utility models, and designs which may hereafter be filed for said invention in any country or countries foreign to the United States, together with the right to file such applications and the right to claim for the same the priority rights derived from said United States application under the Patent Laws of the United States, the International Convention for the Protection of Industrial Property, or any other international agreement or the domestic laws of the country in which any such application is filed, as may be applicable; and all forms of industrial property protection, including, without limitation, patents, utility models, inventors' certificates and designs which may be granted for said invention in any country or countries foreign to the United States and all extensions, renewals and reissues thereof;

AND WE HEREBY authorize and request the Commissioner of Patents and Trademarks of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents or other evidence or forms of industrial property protection on applications as aforesaid, to issue the same to the said ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND WE HEREBY covenant and agree that we have full right to convey our entire interest herein assigned, and that we have not executed, and will not execute, any agreement in conflict herewith.

AND WE HEREBY further covenant and agree that we will communicate to the said ASSIGNEE, its successors, legal representatives and assigns, any facts known to us respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, reissue and foreign applications, make all rightful oaths, and generally do everything possible to aid the said ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper protection for said invention in all countries.

IN TESTIMONY WHEREOF, We hereunto set our hands and seals the day and year set opposite our respective signatures.

Date 1/14/2000 , 1999 | me.m. JAMES S. NORRIS

SS.:

State of SC

County of Charleston

On this 14 day of personally appeared JAMES S. NORRIS, personally known to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

NY2 - 991100.1

Notary Public.

L.S.

		2000	Mich/ L. A	4.11		
	Date 14 January	_, <u>19</u> 99 _	Mull Jas-de	MICHAEL G. SCH	MIDT	L.S.
	State of 5 C)) SS.:				
	County of Charlester) 55.:				
	On this 14 day of 5 personally appeared MICHAEL G whose name is subscribed to the capacity, and that by her signature the instrument.	S. SCHMIDT within instr	T, personally known to rument and acknowled	me on the basis of satisf lged to me that he exec	actory evidence tuted the same in	to be the person his authorized
				me: spoi	0, 2000	Notary Public.
	Date 14 Jan	2000 , 1999	Bu M	BRIAN HOEL		L.S.
: 1:11:	State of SC County of Charlotten) SS.:				
	On this 14 day of 5 personally appeared BRIAN HOE is subscribed to the within instrumby his signature on the instrument	ent and ack	mowledged to me that l	he executed the same in	his authorized ca	pacity, and that
				nce: and	0, 2000	Notary Public.
	Date 14 Jan	2000 _, 1999 _	Joseph Joseph	JOSEPH W. DOLA	John	L.S.
	State of Charlesten)) SS.:				
	On this H day of J personally appeared JOSEPH W. whose name is subscribed to the capacity, and that by his signature the instrument.	within instr	rument and acknowled	iged to me that he exec	cuted the same in	acted, executed
				nce: spil	10,2000	Notary Public.
	Date 14 January	2000 , 1 99 9	;. A. <u>C</u>	Schofie DAVID SCHOFIE	LD	L.S.
	State of SC County of Charleston)) SS.:				
	On this 14 day of personally appeared DAVID SCI whose name is subscribed to the capacity, and that by his signature the instrument.	within inst	trument and acknowled	dged to me that he exec	cuted the same in	n his authorized
				MK	YOU	Notary Public.
				me: April 1	مر معدہ	HOWLY FUDIC.

State of SC. County of Charles SS.: On this H day of James, 1999 before me, a Notary Public in and for the State and County aforesaid personally appeared CAROLINE WESTWATER, personally known to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument the person, or the entity upon behalf of which the person acted executed the instrument. Notary Public Notary Public State of SC. County of Charles SS.: County of Charles SS.: On this H day of James, 1999 before me, a Notary Public in and for the State and County aforesoid, personally appeared CANCAN HUANG personally known to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person added, executed the instrument that the person added, executed the instrument the person added executed the instrument the person added executed the instrument the person added executed the instrument that the person added executed the instrument and executed the same in his authorized capacity, and that the person added executed the instrument and executed the same in his authorized capacity.	Date	14 Janan	, 19 99	Caroline W	CAROLINE WE	STWATER	L.S.
personally appeared CAROLINE WESTWATER, personally known to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument. Date CANCAN HUANG)) SS.:				
State of 5 County of Charles SS.: County of Charles SS.: On this 14 day of Jan, 7999 before me, a Notary Public in and for the State and County aforesaid, personally appeared CANCAN HUANO personally known to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.	pers	onally appeared CAROLI on whose name is subscritorized capacity, and that by	NE WESTWATER ibed to the within it	, personally known instrument and ackr	to me on the basis	s of satisfactory that she execute on behalf of which	evidence to be the d the same in her th the person acted,
On this 14 day of Jan, 1999 before me, a Notary Public in and for the State and County aforesaid, personally appeared CANCAN HUANO personally known to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person adject executed the instrument.	Dat	e	7000) 		CANCAN HUA	O C	L.S.
that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.			} ss.:				
	nan	ie is subscribed to the with	u msu umeni and aci	knowleaged to me in	at he executed me	same mins aumo	rized depactry, ain.